

APS4A Altitude Preselect System

TECHNICAL DATA SHEET

1. General

The Altitude Preselect System APS4A, P/N: AS01-ALTPRE-00, is intended to be used as an interface for Air Data Displays or Primary Flight Displays with alerter function, and a variety of existing Autopilot Systems to supply Altitude Preselect- and Hold-Function:

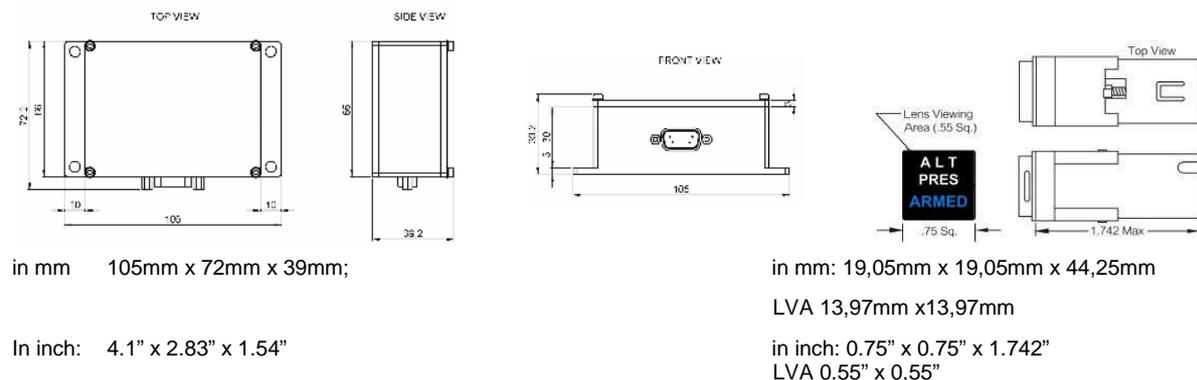
- ARC (Cessna) 400B
- ARC (Cessna) 800B
- ARC (Cessna) 1000
- Century 4
- Century 41
- Century 2000
- Collins AP106
- Bendix King KFC 200
- Bendix King KFC 250
- Bendix King KFC 300
- M4D
- S-TEC System 30
- S-TEC System 50
- S-TEC System 55
- S-TEC System 55X
- S-TEC System 60
- S-TEC System 65

The System is mainly designed for retrofit installation and consists of a small lightweight interface box, the Altitude Preselect Interface Box P/N: AS02-ALTPIB-()() and an Altitude Preselect Indicator/Switch.

2. Operation:

Select desired altitude on Air Data Display or PFD and then enable **Altitude Alerter function**. Press Altitude Preselect Switch, lower **ARMED**-indication field is lighted blue. Altitude Preselect Mode is now engaged. When the preselected altitude is reached, the system automatically activates the Altitude Hold-Mode at this altitude. The **ARMED**-annunciation extinguishes and the **ALT**-indication within the AP system is **ON**.

3. Dimensions



4. Block Diagram

Air Data Display /
 Altimeter w. Altitude-Alerter



PFD's w. Alt.-Alerter



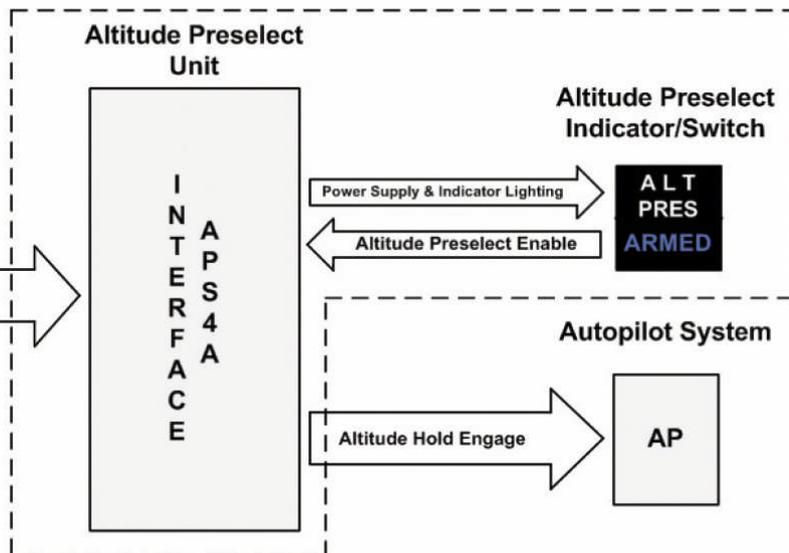
GARMIN G600



ASPEN Avionics
 PFD1000

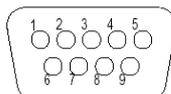
Alerter Visual Out

Altitude Preselect Interface System APS4A



5. Pin Assignment

| Pin | Assignment |
|-----|--|
| 1 | Relay NC |
| 2 | Relay C |
| 3 | Relay NO |
| 4 | 28VDC Lighting |
| 5 | Indicator Lighting ARMED (28VDC or GND to Ind./Switch) |
| 6 | Altitude Preselect ARM (moment. GND, enable from Indicator/Switch) |
| 7 | HI or LO from Altimeter when reached preselected Altitude |
| 8 | GND |
| 9 | 10 to 32VDC Power Supply (internal straps for 14/28VDC operation) |



Connector: D-sub Size 9pin

6. Technical Specification

| | |
|-----------------------------------|---|
| Supply Input | |
| Supply Voltage Range: | 11 to 32 Volts DC |
| Current Consumption: | max. 0.150 Ampere |
| Signal Input | |
| Preselect Input: | Active LOW |
| Altitude Hold Input: | HI or LO |
| Output to Indicator | |
| Output Voltage: | 28VDC or GND (depends on switch configuration) |
| Output Current: | 0.05 Ampere |
| Autopilot Output | |
| Relay Contact: | momentary or continuous contact 1 Ampere resistive |
| Mechanical characteristics | |
| Connector: | D-Sub Size9 / 9PIN |
| Weight: | 250g (8,8oz) |
| Dimensions: | (L x W x H) 105mm x 72mm x 39mm; 4,1" x 2,83" x 1,54" |
| Mounting: | 4 ea. Screws 3.5mm or 6/32" |
| Cooling: | Cooling not required |

7. Environmental Qualification according RTCA DO-160F

| Section | Description | Category | Requirements |
|---------|--------------------|----------|----------------|
| 4 | Altitude: | D2 | 50,000ft max. |
| 4 | Temperature: | D2 | -55°C to +70°C |
| 6 | Humidity: | B | 95% RF max |
| 7 | Operational Shock: | B | 11g |
| 7 | Crash Safety: | B | 20g |
| 8 | Vibration: | R,S | 10g rms |
| 16 | Power Input: | B | see DO-160F |
| 17 | Voltage Spike: | A | see DO-160F |

Env. Cat. [D2]ABB[R(B3)(B4)S(M)]XWXXXXZ[BXX]AB[ZC]WL[A3C3X]XXAX